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[Continued on next page]

(54) Title: INTEGRATED COMPUTER AIDED DESIGN TOOL



(57) Abstract: A computer Aided Design (CAD) tool is configured as an add on tool for an architectural design system, such as AutoCAD, to form an integrated design tool for designing various building systems, such as fire detection and alarm. The integrated design tool facilitates the design of fire detection and alarm systems for buildings without the need to duplicate any of the architectural designs. By configuring the system as an add-on tool, various problems associated with known design tools configured as stand alone CAD systems are avoided. One important feature of the invention is that the system is configured to automatically generate riser diagrams as well as eliminate a number of manual tasks normally associated with the system. Thus, the system in accordance with the present invention not only avoids duplication of the architectural drawings but facilitates the entire fire protection design for a building.

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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/09456

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G06F 17/50

US CL : 703/1

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
U.S. : 703/1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
IEL/IEEE, INSPEC/DIALOG, WEST

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A, P	US 6,567,772 B1 (HOEFT) 20 May 2003 (20.05.03) Background/Summary of the Invention.	1
A	US 4,964,060 A (HARTSOG) 16 October 1990 (16.10.1990) Background/Summary of the Invention.	1
X	MANNO et al., R. The Dream and Reality of Automated Wiring Systems, IEEE, Computer Applications in Power, Vol. 7, No. 1, January 1994, pp. 20-3.	1
A	BARNES II, D.K. Designing and Testing Corrective Actions Using a Desktop Publishing System, Conference Record for the 1998 IEEE Conference on Human Factors and Power Plants, June 1988, pp. 232-7.	1
A	NEWTON, C. Simulated Site Visits. A 4D Multimedia Database for the Study of Architectural Construction, 1999 IEEE International Conference on Information Visualization, July 1999, pp. 62-6.	1
A	SLY, D. Object-Oriented Factory Layout in AutoCAD, Simulation Conference, Vol. 1, December 1998, pp. 275-7.	1
A	BATES, J.F. Transmission Line Computer-Aided Design and Drafting, IEEE, Computer Applications in Power, Vol. 2, No. 3, July 1989, pp. 26-30.	1

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

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"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
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